UPPER SWIFT CREEK PLAN

Adopted By The Board of Supervisors
February 13, 1991

Prepared By The
Chesterfield County Planning Department

Reformatted October 2006

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Executive Summary

The Upper Swift Creek Plan, addresses land use and development for much of northwestrn Chesterfield County. Its scope includes the areas between and along Midlothian Turnpike and Hull Street Road, most areas between and along Midlothian Turnpike and Hull Street Road, most of the Swift Creek Reservoir watershed, and some areas draining to the James. The previously applicable plan for this area is the Powhite/Route 288 Development Area Plan adopted in 1985.

Several issues prompted the need to revise the existing Powhite/Route 288 Development Area Plan:

1. Although the number of new residential building permits for the whole County has been slowing over the past few years, the general westward direction of suburban development is continuing.
2. A new wastewater trunk around the northwestern end of Swift Creek Reservoir is under construction. Development in the study area could now occur with use of public sewer by tying into this new trunk.
3. The opening of the Powhite Parkway extension and of Route 288 has provided improved access between this part of the County and the whole metropolitan area. Further extensions of these highways will continue to open up the area.

4. Swift Creek Reservoir continues a major source of drinking water for the County. Much of the study area lies within the watershed which recharges this source. Future development will have an impact on the water quality of the reservoir.

5. Environmentally sensitive soils, unsuitable for development due to seasonal inundation, saturated soil, high water tables, steep slopes, or prone to shrink-swell extremes, cover much of this area. Under these circumstances the previously adopted plan become out-dated. The goals for the new plan also grew out of them:

Under these circumstances the previously adopted plan became outdated. the goals of the new plan also grew out of them:

1. Maintenance of Swift Creek Reservoir's water quality.

2. Balance between residential and commercial growth.

3. Conservation of environmental and aesthetic resources.

4. Variety in housing types and opportunities.

5. Provision of high quality, yet efficient public facilities.

6. Access to both active and passive recreational opportunities.

The Plan pursues these goals with recommendations for land use, phasing of development and

public facilities.

Land Use Recommendations

The Plan's land use recommendations make recommendations for the distribution of different land uses -- the relative locations for residential, office, commercial, and industrial uses. The following summarizes the major recommendations.

1. Single-family residential development up to 2.2 units per acre in the upper and middle Swift Creek drainage basins -- which density reflects the densities of Brandermill and Woodlake -- provided that existing residential development at lower densities be protected by significant density transitions and buffers.

2. Single-family residential development up to 1.0 unit per acre north of Midlothian Turnpike to reinforce the pattern established by subdivisions along Winterfield Road, and in the area west of Huguenot Springs Road, which cannot be served by planned sewer systems.

3. Major urban centers at the planned intersections of Powhite Parkway and Route 288 incorporating office, commercial, and multi-family developments, within smaller retail and service center recommende, subject to site design, where arterial or collector access exists.

4. A mixture of office and multi-family uses along Route 60 and 360 with commercial nodes integrated within the corridors, where arterial or collector access exists.

5. Buffering of Swift Creek Reservoir and its major tributaries, and also of Genito Road as a scenic corridor.

6. Use of land use based and/or structural stormwater management practices to limit runoff-borne nutrients, toxins, or other pollutants.

7. Required use of public water and sewer.

8. Prohibition of storage or handling of large quantities of federally defined hazardous materials, such as toxins, explosives, corrosives, and radioactives, within the watershed.

Phasing Recommendations

To achieve efficient delivery of public services and to hold down the cost of infrastructure in the study area, phasing recommendations have also been made. The Plan recommends continuing in-fill development in the eastern portion of the study area for Phase One. This area is for the most part already completely developed. The Plan then recommends two conceptual phases of outward growth westward from the leading edge of existing development.

Phase Two would accommodate the population projected for the Year 2005, approximately 64,000 residents or 24,500 dwelling units. Phase Three includes build-out of the entire study area with its projected population of approximately 185,000 residents or 71,000 dwelling units.

Public Facilities Recommendations

Finally, the Plan makes recommendations both for the number of public facilities needed to support the population within the Population 64,000 Horizon and for these facilities' general locations. Such facilities include schools, fire stations, libraries, parks, as well as water and wastewater system extensions.

THE PLAN

SUMMARY OF MAJOR PLANNING FACTORS

The collection of the background information for the Upper Swift Creek area permitted the identification of key planning issues and factors. An understanding of the characteristics which influence development opportunities of the area will provide a sound basis for planning and policy decisions that will shape the area's future. The major planning factors are outlined below and shown on Map A.

Environmentally Sensitive Areas

The single most important feature of the Upper Swift Creek study area is the series of creeks which drain into Swift Reservoir and the potable water source the reservoir constitutes. Tomahawk and Little Tomahawk Creeks, Swift Creek, Turkey Creek, Otterdale Branch, Horsepen Creek, Deep Creek, West Branch, Blackman Creek, Ash Brook and their tributaries all contribute to the water quality and aesthetics of the reservoir and need to be protected. If preserved, these corridors would provide:

buffering opportunities between areas of development; areas for active and passive recreation; and open space. The stream corridors are vulnerable to contamination, if not protected. Contamination would affect both the quality of drinking water from the reservoir and the habitat in which many species of plants and animals live.

Potential Commercial Strip Development

The Upper Swift Creek study area includes portions of two of the County's major arterials: Midlothian Turnpike and Hull Street Road. The development pattern on these two roads has in the past been primarily strip commercial in nature from where they begin in the City of Richmond to where the development thins down and ends. Strip development is undesirable as it causes traffic congestion due to the multiple entrances onto a single highway, the visual blight of continuous buildings and signs along the road frontage, and the waste of the developable land behind these strip businesses. Commercial strip development is not the highest and best use of the land.

These roads are also entry points to the County and offer the first impressions of Chesterfield to motorists. At these areas especially, strip development should not occur and signs should be placed welcoming travelers to Chesterfield.

Existing Residential Strip Development

Although most of the Upper Swift Creek area is undeveloped, some development of residential lots fronting on arterials has occurred. These areas were totally cleared and the houses built in rows, at intersections in the area. Eventually, the focus of these residences will have to be altered, and access provided differently, not directly onto an arterial.

More residential development will occur in these areas, but such strip development must be discouraged. Fortunately, because of the limited road network in this area of the county, much of the interior land is still held as large continuous tracts. This has meant little division into smaller parcels. Most of the 46,000 acres in this area are in parcels in excess of 100 acres, encouraging large, planned developments and communities rather than small fragmented developments.

Existing Planned Developments

Two large planned developments, Brandermill and Woodlake have set a trend in residential development in the Upper Swift Creek study area. These developments have included lower densities, large tracts of preserved forest and open space, active and passive recreation facilities, a variety of housing types, pedestrian and bicycle trails, integrated retail activities and personal services, and semi-public access to the reservoir.

Areas Not Sewerable by Planned Systems

A small area within the study boundaries drains toward neither the reservoir nor Michaux Creek. This precludes the area from being served by either the Upper Swift Creek Transport System or planned connections to the James River trunk lines. For the foreseeable future, only wells and septic tanks could be used. Thus land uses should be less intense in these areas.

Swift Creek Reservoir

Viability of Swift Creek Reservoir as Continuing Source of Drinking Water At present, the Reservoir is almost at capacity for the maximum safe yield. The current water quality is good and a study has been conducted of the Reservoir for contaminants from nearby development. Preservation of the water quality must be pursued as the reservoir's watershed is developed.

Views of Reservoir

Swift Creek Reservoir is a visual amenity to be shared by all who live or work in the area. The views of the reservoir should be preserved by limiting the intensity of development around the Reservoir. Public access to the Reservoir should be sought, if simply by maintaining roadside views.

Genito Roads/Scenic Corridor

Genito Road from the east side of Swift Creek Reservoir to the Powhatan County line is an attractive corridor with an abundance of roadside trees and scenic views of the Reservoir and the various wetlands nearby. Efforts should be taken to preserve this corridor by designating it as a scenic road and by requiring larger setbacks for developments with little or no tree removal. By saving this scenic corridor, the natural appearance of the area will be preserved.

Planned Limited Access Highway Corridor and Intersections

The recent zoning approvals of the large and intense developments of CentrePointe, Acropolis and Waterford at the interchange of Powhite Parkway and Route 288, have shown that this area will become an urban core for the County. The Upper Swift Creek area, which includes this urban core and two limited access highways with several intersections, will continue to be an area of rapid growth.

GOALS

- *Nondegradation of Swift Creek Reservoir's water quality*

  Swift Creek Reservoir is a major potable water source for the county, a recreational resource for some adjoining residents, and a visual aesthetic resource for all. Maintenance of the existing quality of water would ensure a plentiful and economical source of drinking water and a waterscape free of excessive algae.

- *Balance between residential and commercial growth*

  Balance will contribute to the area's long term economic strength and revenue generation. It also fosters a greater sense of community by providing housing, service, and employment areas which interrelate with one another and form a sense of place.

- *Conservation of environmental and aesthetic resources*
  Preserving environmentally-sensitive and aesthetic areas provides significant environmental protection: water quality maintenance, flood water holding capacity, wildlife habitats; as well as maintaining the attractive rural appeal of the area.

  Importantly, the designation and protection of these resources anticipates requirements of the Chesapeake Bay Preservation Act. As one of the forty-six Virginia Tidewater jurisdictions, the county has the task of designating Chesapeake Bay Preservation Areas within its boundaries. Additionally, Chesterfield and the other local governments will need to integrate the criteria developed by the Chesapeake Bay Local Assistance Board into their comprehensive plans and ordinances, in order to appropriately address land use issues within Preservation Areas.

- *Variety in housing types and opportunities*

  Broader ranges of housing types and costs attract employers and make housing affordable for more people. A balance of multi-family and single family housing helps to stabilize school and recreation facility demands.

- *Provision of high quality, yet efficient public facilities*

  Efficient delivery of public facilities holds down costs to the taxpayer as well as to the new home buyer. Efficiency also frees up fiscal resources for the higher quality facilities.

- *Access to both active and passive recreational opportunities*

  Convenient access to recreational opportunities promotes the frequent use of facilities, which heightens the quality of life and makes the provision of facilities more economically efficient.

LAND USE RECOMMENDATIONS

The plan designates residential development for the vast majority of land within the study area, while recognizing necessary constraints on the Upper Swift Creek watershed. The plan recommends flexibility in housing styles while preserving open space and maintaining low densities.

Recommendations also provide for commerce and employment to serve new residents. A hierarchy of activity nodes is established ranging from regional centers with major employers, specialized consumer services, and higher density housing to convenience nodes designed to offer limited household consumable goods to a surrounding residential market. The location of each of these centers is tied to road access.

For both residential and non-residential land uses within the Swift Creek Reservoir watershed the plan recommends development densities, styles, and practices to reduce pollutant-bearing runoff to the reservoir.

General Recommendations

- To protect adjoining dissimilar land uses or densities of development, buffers should be established between them. Such buffers should use a combination of berms, fences, and/or vegetation. Where possible natural

vegetation and existing trees should be maintained for buffers and landscaping.

Further, transitional land uses or densities should be established between dissimilar uses or densities of development, usually within the area designated for the more intense use. Such transitional land uses should be of an intensity intermediate between the differing designations and should provide adequate geographic distance to avoid abrupt shifts in neighboring land uses.

- Development throughout the study area should preserve existing natural settings and vistas. New development should preserve existing public views of Swift Creek Reservoir and maximize the number of new countryside or reservoir views from individual dwelling units and from the public areas within development.

- The natural forested corridor along Genito Road from the Powhatan County line to Swift Creek Reservoir should be maintained. Where possible new land uses along the corridor should face intersecting roads, and in all circumstances should maintain deep, densely wooded buffers along Genito Road. Building heights along this corridor should be low enough to be screened by the wooded buffers.

- Development throughout the study area should use public utilities, due to the predominance of triassic soils unsuitable for private wells or septic systems, and the sensitivity of the reservoir to contaminants in runoff or groundwater.

- Within the Swift Creek Reservoir watershed new development should use a mix of land use based and/or structural stormwater management practices to ensure that runoff-borne nutrients, toxins, or other pollutants do not degrade the water quality of Swift Creek Reservoir.

- A buffer should be located within one hundred feet of the 178 foot elevation contour around Swift Creek Reservoir or within one hundred feet of the edge of water of any perennial tributary of Swift Creek Reservoir as designated on the most current United States Geological Survey maps (solid blue line); except for pedestrian or bicycle trails, and roads or bridges crossing these bodies of water.

- Storage and/or handling of large quantities of hazardous materials should be prohibited within the watershed, except for retail motor fuel sales, which should be located as far upstream from Swift Creek Reservoir and its major tributaries as possible, and should use the best design possible to contain spills or leakage. (Hazardous materials, as defined by federal agencies, include, but are not limited to, substances that are toxic, carcinogenic, corrosive, explosive, ignitable, or radioactive.) Landfills or waste disposal facilities (except for septic tanks) should likewise be prohibited within the watershed.

THOROUGHFARE RECOMMENDATIONS

This plan takes into account existing conditions and trends in land use plans for adjoining areas.

General Recommendations

- The fewest number of driveways possible should enter collector and arterials roads.

- Access to residential lots should be provided by local streets, not by collectors or arterials. Local streets should, where possible, form loops and not provide direct routes through residential development.

Functional Classifications

The recommended corridors and functional classifications for roads other than local streets are displayed on Map C. The functional classifications for roads shown are more particularly described as follows:

- LIMITED ACCESS (200')

  A limited access road is an expressway with fully controlled access, which give preference to through-traffic by providing access connections with selected public roads only and prohibits at-grade crossings or direct private driveway connections. The right-of-way width for a limited access road is 200 feet.

- MAJOR ARTERIAL (120' - 200')

  Such a major arterial road provides major circulation movements and accommodates through-travel; serves major centers of activity; has a high traffic volume; accommodates long trips; and carries a high

proportion of the total right-of-way width for such an arterial ranges from 120 to 200 feet.

- MAJOR ARTERIAL (90')

  Such a major arterial road interconnects with, and augments, the principal arterial system, accommodates trips of moderate lengths; where possible, does not penetrate identifiable neighborhoods; and distributes travel to small geographic areas. The right-of-way width for such an arterial is ninety feet.
- COLLECTOR (70')

  A collector road provides both land access service and traffic circulation within residential neighborhoods, and commercial and industrial areas; may penetrate residential neighborhoods; distributes trips from an arterial through an area to ultimate destinations; and/or collects traffic from local streets in residential neighborhoods and channels it to an arterial. The right-of-way width for a collector road is seventy feet.

HISTORIC PRESERVATION RECOMMENDATIONS

Historic Sites in the Upper Swift Creek study area are identified on Map D. They do not occur in a concentration appropriate for an historic district. However, the following recommendations are made:

- Whereas eighteen of the twenty-two sites listed have buildings in good condition and all but two of these are used as originally intended; the structures should be further researched to determine if historic landmark designation should be granted.

- Cheathams and the Fuqua Farm should be investigated to ascertain whether the buildings have actually been destroyed.

- When cited structures are incorporated into new development, their historic use should, if possible, be continued and their historic setting should be maintained.

PHASING RECOMMENDATIONS

The size and location of new development areas are commonly determined on the basis of intuitive judgment rather than through an assessment of alternative growth sequences. However, this approach does not consider the costs of public services associated with different growth sequences. An efficient sequence of growth with efficient delivery of public services is an important issue, whether costs are borne by all county taxpayers or by new home buyers: Avoiding waste of fiscal resources means tax dollars go farther; holding down costs for new homes means more affordable housing.

Planned Managed Growth and Dispersed Growth, Efficiency and Predictability

Two hypothetical growth scenarios can be modeled for the study area: planned managed growth -- that is, development outward from the edge of existing development and available services -- and dispersed growth -- that is, diffused or leap-frog development. Planned managed growth would be characterized by sequential development of land adjoining areas already developed. Dispersed growth would be characterized by development of land in isolated pockets with considerable distance between the development and the existing edge of the urbanized area. Compare Maps E and F for an example of how the same number of new residents (63,700 as projected for the Year 2005) could be settled in the study area.

The demand for individual capital facilities -- such as schools, libraries, parks and fire stations -- is generated by the number of people to be served. Therefore the demand for these capital facilities would be the same in 2005 under both sequences; however, significant operating costs are reduced when the client population is closer to public facilities in the planned managed growth scenario. In the case of schools, the cost of transportation could be reduced because the attendance zones for a given school would be smaller. In the case of libraries and parks, proximity to potential users means greater numbers of people actually using the facilities, and, hence, greater cost efficiency as the cost of service delivery per person comes down. For fire stations, too, tighter service areas mean faster response time and therefore improved efficiency and safety for homeowners and businesses.

The cost of infrastructure networks -- such as water and wastewater lines, and transportation and communication networks -- however, is not driven by population alone, but also by the geographic area to be served. In the concentric growth scenario users would tie into lines sequentially, thus maintaining a high ratio of users to linear feet of improvements, resulting in lower cost per user. In the dispersed model

development could occur separated from existing infrastructure requiring extension of the network over great distances. In this model the ratio of users to linear feet of improvements is lower resulting in a higher cost per user.

Planned Managed growth would be more efficient than dispersed growth, and although some of the costs of development are passed on to new home buyers by means of fees or in the cost of a new home itself, they still constitute a cost burden to the public.

A predictable growth pattern can also assist the county both in anticipating growth, and in efficiently planning and providing the public facilities and services to support growth. It also promotes stability in land development, so that the public, whether developer, buyer or tenant, can more easily anticipate where the leading edge of rural to urban conversion will occur and what public services will be provided.

For both its efficiency and predictability the planned managed growth scenario is recommended.

Phases One, Two, Three

The recommended growth sequence for the Upper Swift Creek study area is depicted on Map G.

- PHASE ONE: Infill Development

  Phase One includes the area already developed. Within this area some undeveloped tracts do still exist. Infill development can take advantage of facilities already in place to increase efficient land use and service delivery, and should continue as Phase Two is developed.

- PHASE TWO: Population 64,000

  Phase Two constitutes the area sufficiently large enough to contain the population projected for the Year 2005 (that is, enough land for the projected number of new residents, approximately 64,000, plus fifty percent more land to accommodate possible market anomalies). This phase excludes areas which cannot be sewered by planned trunk systems and includes areas which will be accessible by extensions of Powhite Parkway.

  The horizon between Phases Two and Three is not a precise boundary. It reflects the population projected for the Year 2005, and is intended to direct growth to the leading edge of development within the study area until that time. It is not intended to halt land development if growth in the study area occurs faster than projected.

  Further, while the horizon is intended to prohibit leap-frog development beyond the leading edge of urban development and available public services, it might be warped into sectorial patterns by the availability of water and wastewater lines, which would make development feasible in spite of the poor soils present in this area. The horizon's function is to ensure that isolated developments do not occur beyond the area served by public facilities and infrastructure. The horizon should be examined and revised, if necessary not later than 1995.

- PHASE THREE: Build-Out

  Phase Three comprises the balance of the study area: complete build out of the Upper Swift Creek Watershed within Chesterfield County. The land in this area is recommended for agricultural or forestal uses until either the horizon is amended to include additional land or until Phase Two is built out. Planned development could occur in this area, with adequate provision of the public facilities demanded by new development, such as schools, libraries, fire stations, parks, water and wastewater lines, as well as road improvements.

PUBLIC FACILITIES RECOMMENDATIONS

The development for the Upper Swift Creek area will lead to population growth and new demand for County services and facilities. New residents will require new capital investments in schools, fire station, libraries, parks, utilities, and roads. New businesses, as well, will require new investments in fire stations, utilities, and roads.

To meet the demand for capital facilities generated by new development in Phases One and Two of the study area -- and the ensuing population growth -- numerous public facilities will need to be funded and built. The numbers of schools, fire stations, libraries, and parks needed to serve the projected year 2005 population of approximately 64,000 residents are presented below. In each case the excess capacity of

existing facilities has been accounted for.

As development of Phase Two progresses, the County's capital improvements program should be revised to include the necessary new public facilities, to ensure that the services they house can come on line along with the new housing and businesses they will serve. For, though revenue generated by development can pay for only part of the capital cost of new facilities, cash proffers, land dedication, and/or impact fees could be used to complete the funding for new facilities. Further, if early development in Phase Three were to occur, adequate public facilities could still be delivered despite the lack of an existing tax base to bear its share of the capital costs. Here the same funding mechanisms could provide a greater share of the capital cost of the necessary new public facilities.

Multiple potential sites for these public facilities are recommended on Map H. These sites must be evaluated and compared carefully according to criteria discussed below.

Recommendations for the extent of the future utilities network are also discussed below, and the current Water and Wastewater Master Plans are shown on Map H.

Recommendations for the future road network in the study area have been discussed above (see Thoroughfare Recommendations) and are shown on Map C.

- SCHOOLS

  The criteria used to compute the school need for Phases One and Two were drawn from The Chesterfield Plan for Public Facilities and from the Chesterfield Department of Budget and Management. The latter notes that each household in Chesterfield County produces 0.59 school-age students: 0.29 elementary school students, 0.13 middle school students, and 0.17 high school-age students. This results in a total of approximately 3,800 unserved elementary school students, approximately 2,200 unserved middle school students, and approximately 2,100 unserved high school-age students; requiring a need for five elementary schools, two middle schools, and two high schools, in addition to the existing schools.

  Specific siting criteria for schools includes good access, proximity to students (for elementary schools 90% of students should live within a two mile radius, for middle and high schools 90% of students should live within a five mile radius), and potential co-location with public parks.

- FIRE STATIONS

  The fire department criterion for new facilities is based on the number of calls a station receives outside its five-minute response time. Since this is hard to predict into the future, the department also establishes a ratio of one fire station to serve approximately twelve thousand residents in the County. Using all of these criteria, for approximately 45,700 unserved persons in Phases One and Two, there would be a need for a total of four fire stations in addition to existing Clover Hill and Midlothian Fire Stations, and the planned fire station at CentrePointe which is included in the adopted Capital Improvements Program, but which is not yet on line.

  Specific siting criteria for fire stations include good access and proximity to development. Fire stations should cover all of the developed area in a five-minute response time -- an approximate 2.5 mile radius travel distance.

- LIBRARIES

  The criteria used for library demand is one library for every 52,000 people. The number of unserved persons in Phases One and Two is approximately 45,100. This generates demand for only one library in addition to the library in the vicinity of the Deer Run subdivision which has been included in the adopted Capital Improvements Program.

  Specific siting criteria for libraries include visibility, good access, and proximity to concentrated populations - criteria similar to retail sales.

- PARKS

  The criteria for the amount of public recreation areas is the provision of 6.5 acres of community park land for each 1,000 residents. The location and cost of neighborhood parks are not included in these public facilities recommendations because they are usually associated with elementary schools, and may be included in the costs and development of those facilities. Community park land is scarce in the Upper Swift Creek

area. Computing the need for the unserved Phase One and Two population (approximately 44,900), approximately 300 acres of community park land would be needed. This translates to approximately two to three typical community parks such as Ironbridge or Rockwood.

A need for this type of facility was identified in the five year CIP adopted April 1, 1988 and in the Midlothian Area Community Plan. This park would also serve a large portion of the Upper Swift Creek Area. There is an opportunity, however, to develop the remainder of the needed park acreage into linear parks along Swift Creek and other tributaries of Swift Creek Reservoir. These facilities would contain activity-oriented space such as ball fields, on suitable land adjacent to the stream corridors, but would also have long natural open spaces along the creeks for hiking/biking trails, nature and exercise walks and picnicking. These areas would preserve the natural waterways, protect water quality and provide buffers between large tracts of land. Eventually, all of the Swift Creek corridor to the Powhatan County line could be treated in this manner, along with the other major streams. On the map, however, symbols are simply shown providing good access from the thoroughfare network to the streams; while the location on the upper reaches of Swift Creek Reservoir would also include visual access to the reservoir.

- UTILITIES
  The provision of water and sewer for Phase Two would occur as part of private land development, but would be limited to this phase. Development outside Phases One and Two would continue to use wells and septic systems for the needs of agricultural and forestal uses until the logical progression of private development concomitant construction of water and sewer lines would enable land to be developed more fully.

IMPLEMENTATION

Implementation of a plan is the necessary step to convert the vision expressed in goals and recommendations to reality. Implementation of the Upper Swift Creek Plan can include both public an private efforts toward undertaking and guiding development.

Historic Preservation

The earliest examples of historic preservation were private action. Such effort is seen today in the inclusion of both Tomahawk Farm and the Ellett House in the Greenspring development program. Such private actions should continue to be encouraged.

However, protection of historic resources can also be addressed directly by the county under the state enabling legislation which permits designation of historic landmarks. The impact of designation of a property as a historic landmark is two-fold: the requirement of architectural review by the Chesterfield Preservation Committee for any exterior alteration, remodeling or new construction; and prescribed methods for finding an alternative to demolition prior to the permitted razing of a building.

Overlay District

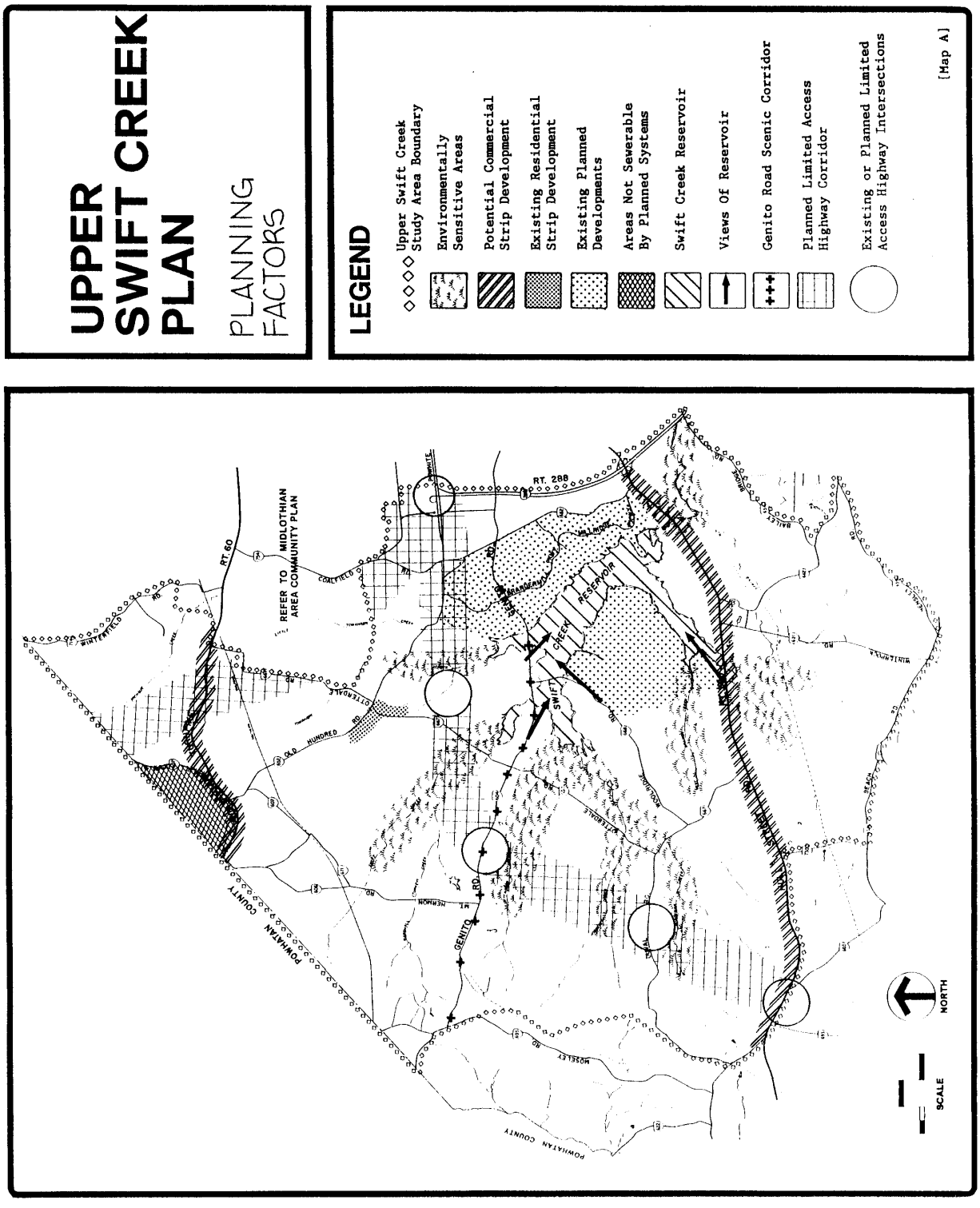
Special zoning districts can be tailored for particular parts of the county, to govern development standards, while allowing land use to be governed by the "underlying" zoning districts. Such a district is proposed for the Swift Creek Reservoir Watershed in concert with local implementation of the General Assembly's Chesapeake Bay Preservation Act.

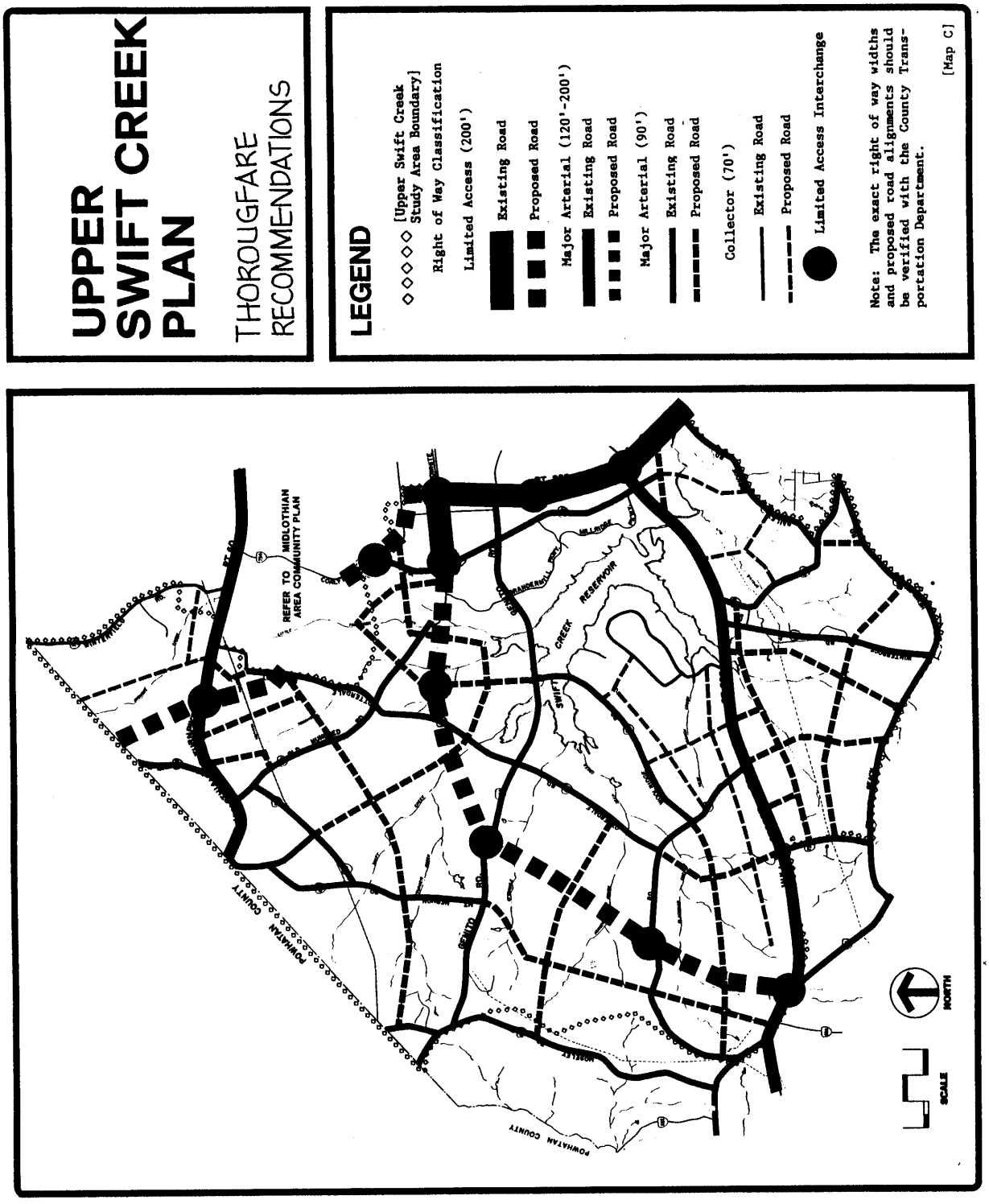
Rezoning

Most frequently, however, zoning cases are instigated by property owners. This is also true of requests for Conditional Uses, Special Exceptions, and Conditional Use Planned Developments. Adopted plans provide direction for staff and Planning Commission recommendations, and to the Board of Supervisors' final actions. Thus, implementation of the plan occurs as land is proposed for development (or re-development) and goes through the processes of zoning review.

Capital Improvements

Finally, plans are implemented as the county makes decisions on investments in public facilities: roads, drainage facilities, utilities, schools, libraries, fire stations, parks and a variety of government buildings. When the County's capital improvements program is revised, adopted plans are again used as guiding tools. Capital improvements should be underwritten with a variety of funding mechanisms including bond proceeds, property taxes, user fees, special assessment districts, cash proffers, and impact fees.


UPPER SWIFT CREEK PLAN
PLANNING FACTORS
LEGEND
Upper Swift Creek Study Area Boundary
Environmentally Sensitive Areas
Potential Commercial Strip Development
Existing Residential Strip Development
Existing Planned Developments
Areas Not Sewerable By Planned Systems
Swift Creek Reservoir
Views Of Reservoir
Genito Road Scenic Corridor
Planned Limited Access Highway Corridor
Existing or Planned Limited Access Highway Intersections
[Map A]
RT. 288
RT 60
REFER TO MIDLOTHIAN AREA COMMUNITY PLAN
COALFIELD RD
OLD HUNDRED RD
GENITO RD
POWHATAN COUNTY
SWIFT CREEK RESERVOIR
NORTH
SCALE


UPPER SWIFT CREEK PLAN
THOROUGFARE RECOMMENDATIONS
LEGEND
[Upper Swift Creek Study Area Boundary]
Right of Way Classification
Limited Access (200')
Existing Road
Proposed Road
Major Arterial (120'-200')
Existing Road
Proposed Road
Major Arterial (90')
Existing Road
Proposed Road
Collector (70')
Existing Road
Proposed Road
Limited Access Interchange
Note: The exact right of way widths and proposed road alignments should be verified with the County Transportation Department.
[Map C]
REFER TO MIDLOTHIAN AREA COMMUNITY PLAN
SWIFT CREEK RESERVOIR
POWHATAN COUNTY
POWHATAN COUNTY
NORTH
SCALE

UPPER SWIFT CREEK PLAN

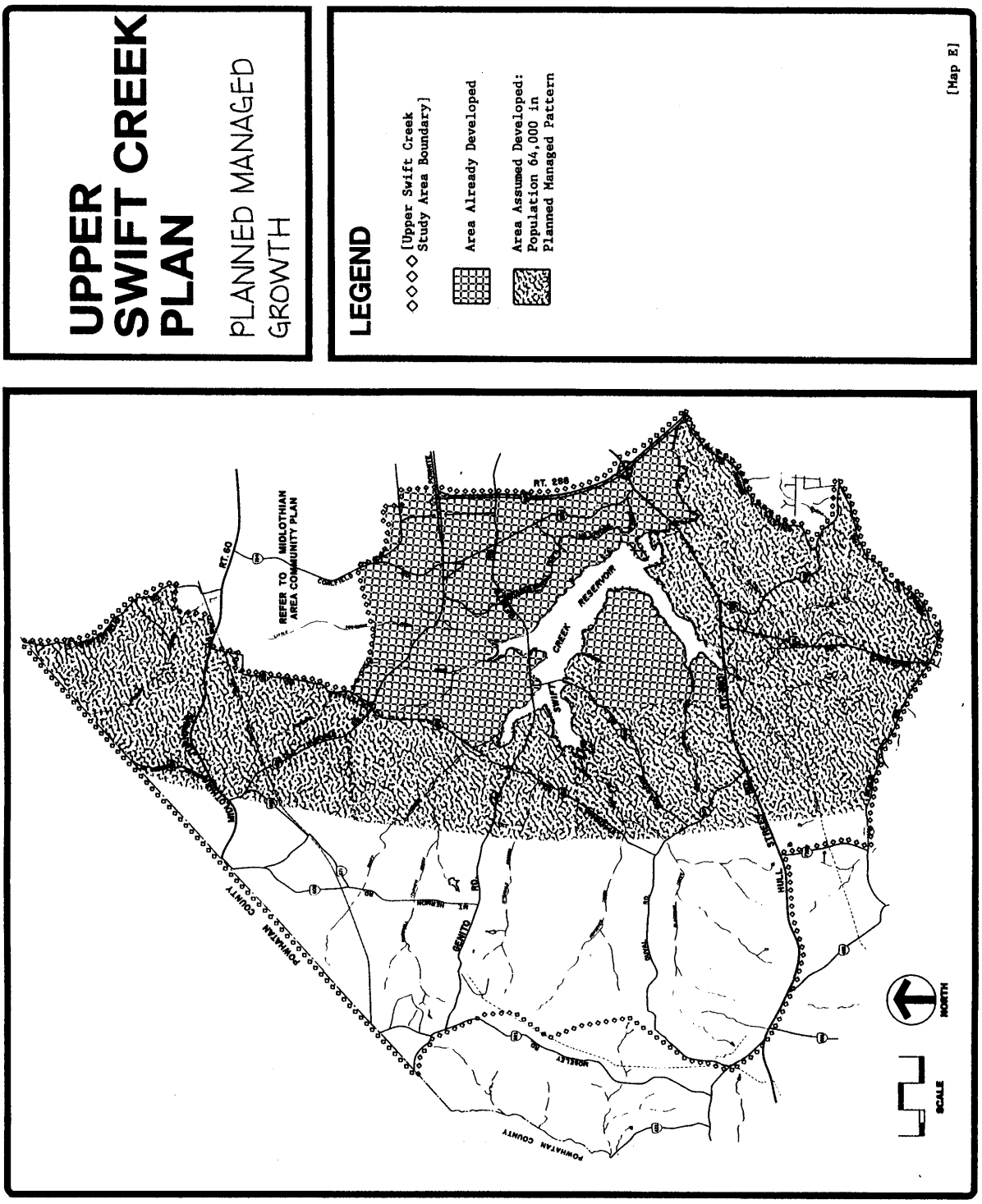
HISTORIC AND CULTURAL RESOURCES

LEGEND

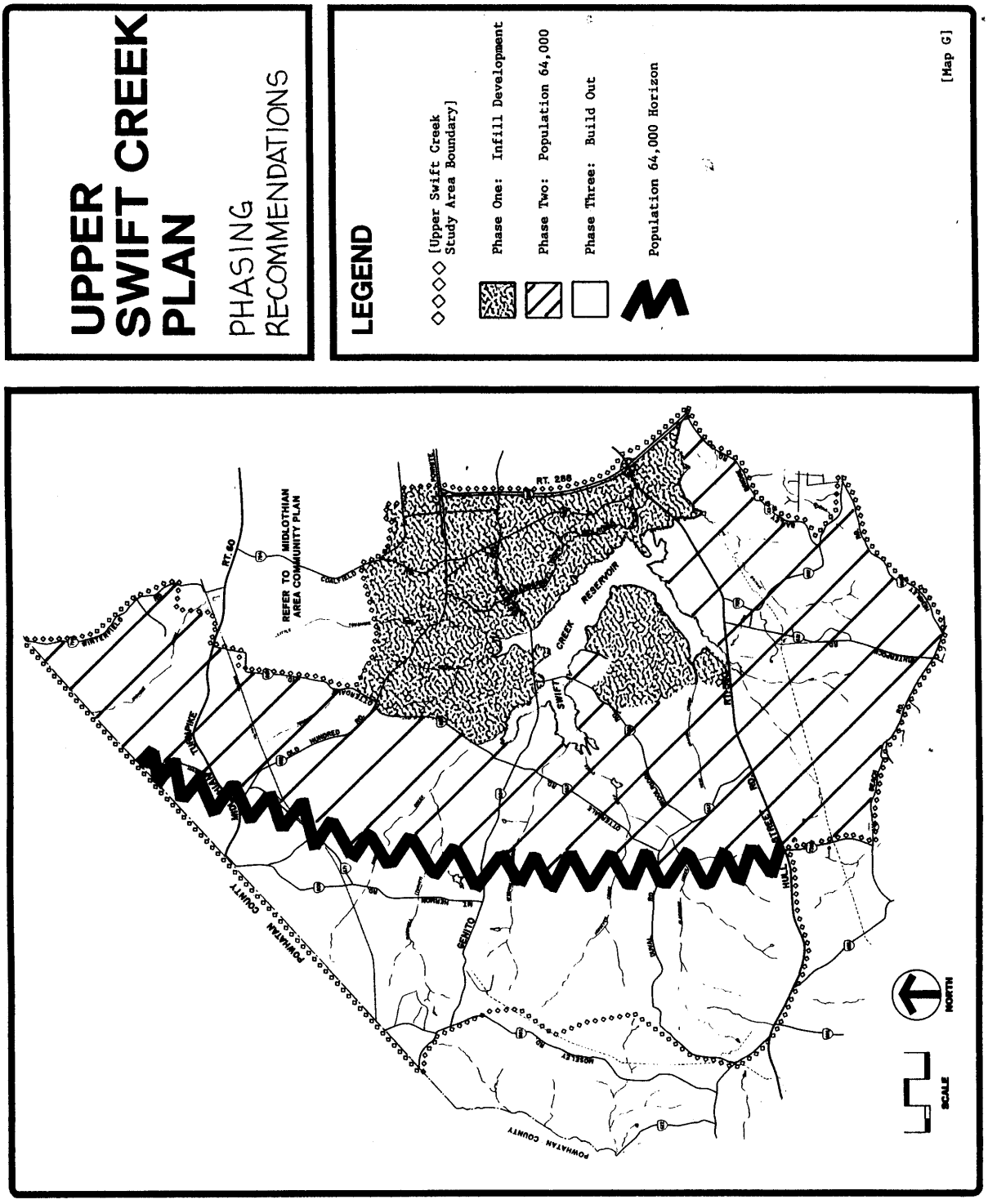
◇◇◇ [Upper Swift Creek Study Area Boundary]

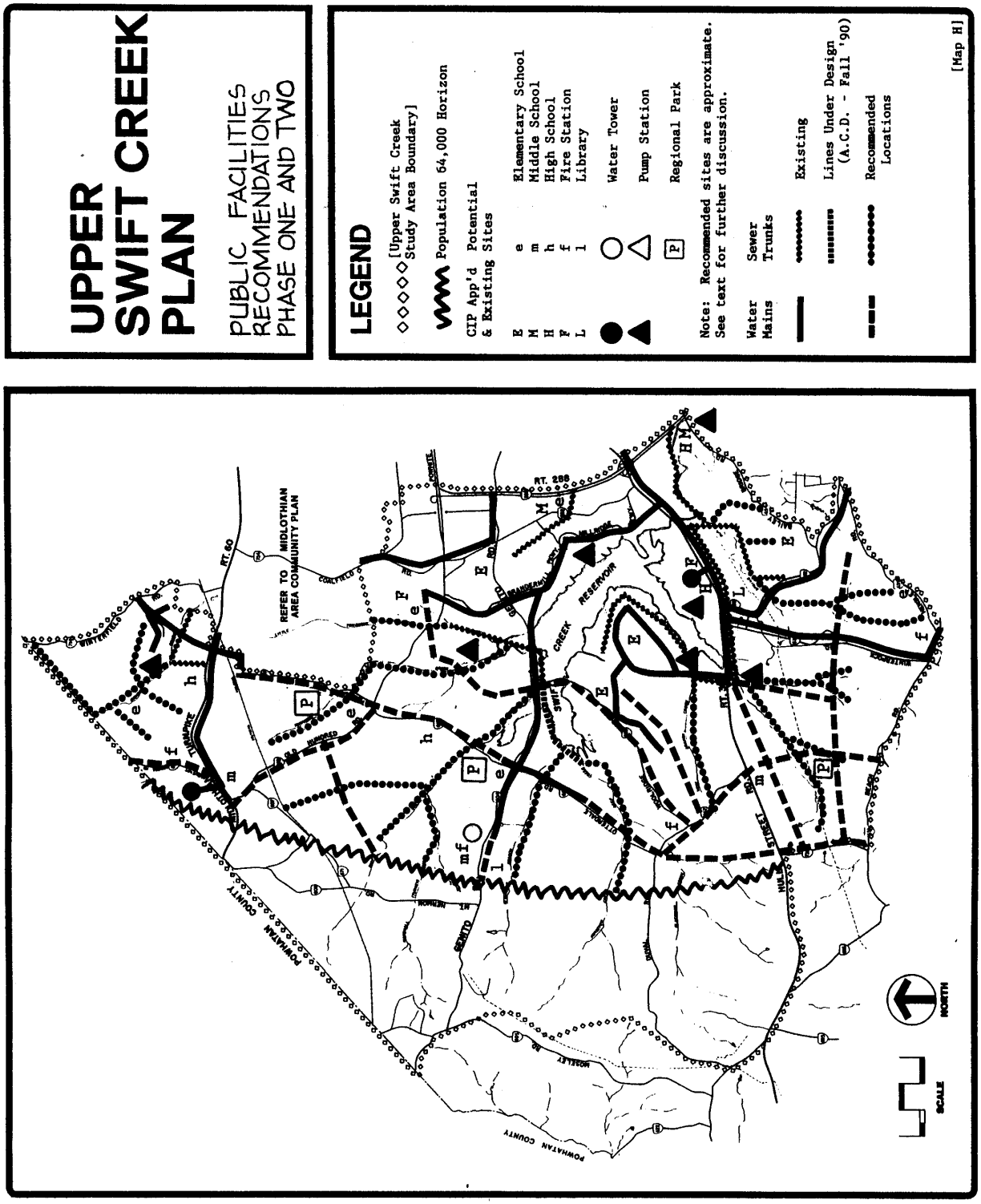
1 Arndale
2 Beverley Crump House
3 Cheathams (Site)
4 Clay Brooks Farm
5 Jameson-Crump House
6 Ellett House
7 Fuqua Farm (Site)
8 Lacy Farm (Site)
9 Lattice Hall
10 Lester Farm
11 Magnolia Grange
12 Montevideo
13 Mt. Hermon Baptist Church
14 Otterdale School
15 Roseland
16 St. Leger
17 Tomahawk Baptist Church
18 Tomahawk Farm
19 Turkey Run Farm
20 Twin Oaks
21 Woodfin Farm

[Map D]


UPPER SWIFT CREEK PLAN
PLANNED MANAGED GROWTH
LEGEND
[Upper Swift Creek Study Area Boundary]
Area Already Developed
Area Assumed Developed: Population 64,000 in Planned Managed Pattern
[Map E]
RT. 288
RT. 60
REFER TO MIDLOTHIAN AREA COMMUNITY PLAN
SWIFT CREEK RESERVOIR
POWHATAN COUNTY
NORTH
SCALE

UPPER SWIFT CREEK PLAN
DISPERSED GROWTH
LEGEND
[Upper Swift Creek Study Area Boundary]
Area Already Developed
Area Assumed Developed: Population 64,000 in Dispersed Pattern
[Map F]
REFER TO MIDLOTHIAN AREA COMMUNITY PLAN
RT. 60
RT. 288
SWIFT CREEK RESERVOIR
POWHATAN COUNTY
SCALE
NORTH

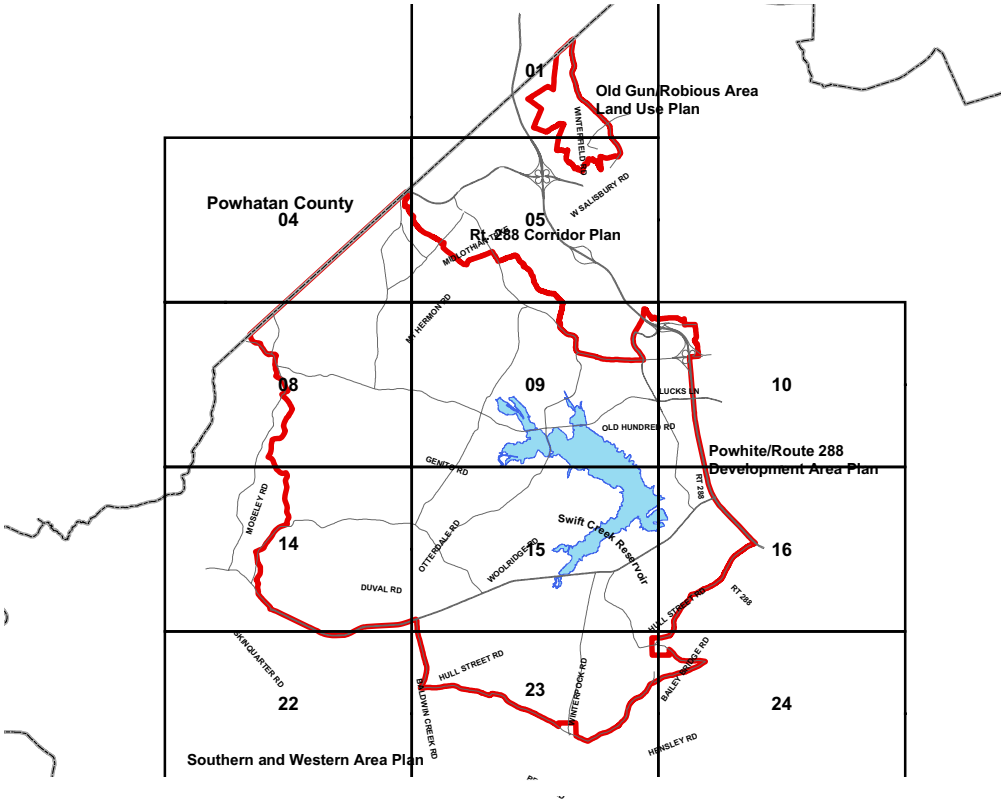

UPPER SWIFT CREEK PLAN
PHASING RECOMMENDATIONS
LEGEND
[Upper Swift Creek Study Area Boundary]
Phase One: Infill Development
Phase Two: Population 64,000
Phase Three: Build Out
Population 64,000 Horizon
[Map G]
RT. 288
RT. 60
REFER TO MIDLOTHIAN AREA COMMUNITY PLAN
SWIFT CREEK RESERVOIR
POWHATAN COUNTY
NORTH
SCALE


UPPER SWIFT CREEK PLAN
PUBLIC FACILITIES RECOMMENDATIONS PHASE ONE AND TWO
LEGEND
[Upper Swift Creek Study Area Boundary]
Population 64,000 Horizon
CIP App'd Potential & Existing Sites
E Elementary School
M Middle School
H High School
F Fire Station
L Library
Water Tower
Pump Station
Regional Park
Note: Recommended sites are approximate. See text for further discussion.
Water Mains Sewer Trunks
Existing
Lines Under Design (A.C.D. - Fall '90)
Recommended Locations
[Map H]
REFER TO MIDLOTHIAN AREA COMMUNITY PLAN
RT. 288
RT. 60
SWIFT CREEK RESERVOIR
POWHATAN COUNTY
SCALE
NORTH

The Upper Swift Creek Plan

In 2006, Chesterfield County Planning Department consolidated all individual land use plan maps in the Plan For Chesterfield into the county's Geographic Information System (GIS). The land use plan for The Upper Swift Creek Plan is now published in two forms: 1) as part of a countywide land use plan map, and 2) on land use plan grid map numbers 01,04,05,08,09,10,14,15,16,23,24

The recommended land use category definitions for the land use plan and the notes associated with the plan follows this page.



Copies of the Plan For Chesterfield countywide land use plan map and each of its more detailed 46 grid maps are available through the following sources:

- On the *Chesterfield County Planning Department* CD. This CD is included with paper copies of *The Plan for Chesterfield*, and also available separately from the Chesterfield County Planning Department.

- On Internet at http://www.chesterfield.gov/plan.

Questions Concerning the Plan For Chesterfield and its related land use plans should be directed to the Chesterfield County Planning Department at 804/748-1050 or planning@chesterfield.gov.

The Upper Swift Creek Plan

Land Use Categories

Land use recommendations for specific locations in the Upper Swift Creek study area are found on Map 13. The categories are as follows:

- **SINGLE FAMILY RESIDENTIAL:** 1.00 unit per acre or less

  Appropriate land uses in these areas include conventional single family housing; churches, synagogues; and public schools, parks and other public uses. Uses permitted in circumstances limiting their negative impacts could include private schools, recreation facilities, and day care facilities.

  Residential density should not exceed one unit per gross acre.

- **SINGLE FAMILY RESIDENTIAL:** 2.20 units per acre or less

  Appropriate land uses in these areas include conventional single family housing; churches, synagogues; and public schools, parks and other public uses. Uses permitted in circumstances limiting their negative impacts could include private schools, recreation facilities, and day care facilities.

  Overall residential density should not exceed two and two-tenths units per acre; however, where new development adjoins existing residential development of a lower density, significant transitional areas of intermediate density must be provided. Such transitions should be gradual, and be based upon characteristics of the land involved depending upon the size and type of buffers and street layout.

  In addition to conventional single family development, innovative development styles would be appropriate in these areas, when included in large coordinated planned developments. Rural villages of clustered houses ranging from 150 to 500 dwelling units are one such possibility. Such villages could integrate townhouses, apartments, or condominiums with clustered detached single family housing. They could also incorporate a Convenience Node -- or possibly a Neighborhood Node, depending on the number of dwelling units in the planned community and on adequate access. (See Convenience Nodes below.) Such villages would be internally focused; would center on a community plaza, green, park, or other facility; would provide a continuous network of pedestrian ways; and would be surrounded by open space.

- **REGIONAL MIXED USE:** Residential, Corporate Office, Regional Commercial

  Appropriate land uses in these areas include regional-scale office or commercial developments, especially, large projects containing a mixture of townhouse or multi-family residential, corporate office, regional commercial and light industrial uses. Typical uses here include those described below for Regional Nodes. Likewise, uses permitted under special circumstances include those described below for Regional Nodes. Residential densities should range from ten to eighteen units per acre, and could go up to twenty-five units per acre with provision of decked parking.

- **COMMUNITY MIXED USE:** Residential, Corporate Office, Community Commercial
  Appropriate land uses in these areas include community-scale office or commercial developments, especially, smaller projects containing a mixture of townhouse or multi-family residential, corporate office, and community commercial uses. Typical uses here include those described below for Community Nodes. Likewise, uses permitted under special circumstances include those described below for Community Nodes. Residential densities should range from eight to fourteen units per acre.

- **MIXED USE CORRIDORS:** Multi-Family Residential, Corporate Office, Neighborhood Commercial Nodes, Convenience Nodes

  Appropriate land uses in these areas include residential developments of various densities as well as professional, business and administrative office parks and integrated supporting uses. Such developments should extend no farther than 1,000 feet from the major arterial; however, existing natural or built boundaries (such as bodies of water, floodplains, rights of way, or utility corridors) are preferable to an arbitrary depth. In all cases an appropriate transitional use or large buffers should be provided between uses along the highway and the residential uses outside of the corridor.

  Appropriate multi-family residential developments should be well buffered from the major arterial; have limited, coordinated accesses; and have densities up to ten units per acre.

  Appropriate non-residential developments should create no undue noise or glare; have limited, coordinated accesses; and be compatible with adjacent residential developments. Typical Uses would include: business, governmental, medical, or professional offices; libraries; brokerages; churches, synagogues and related religious buildings; convalescent, nursing, or rest homes; group care facilities; nursery schools and child or adult day care centers; travel agencies; art schools, galleries, museums; mortuaries; hotels; medical laboratories or clinics; communications offices or studios (exclusive of towers); and public or private schools or colleges. Uses permitted in circumstances limiting their negative impacts could include: optometry sales, pharmacies, hospitals; veterinary offices; non-profit, civic, social and fraternal lodges; artist or office supply stores; health clubs; trade or training schools; fire stations; golf courses, playgrounds and athletic fields, public or private parks; towers; and office/warehouses. No goods should be produced or manufactured in these areas, except for goods to be sold at retail at the same location.

  Further, both Neighborhood Commercial Nodes and Convenience Nodes, as described below, could be incorporated within this corridor. Direct access to the major arterial highway should be limited and coordinated with adjacent uses. Convenient pedestrian links to adjoining developments should be provided.

- **CONSERVATION: Passive Recreation**

  The 100-year floodplains and ponds lying along the major tributaries of Swift Creek Reservoir are optimal for preserving open space, vegetation, natural drainage courses, and the water quality of the reservoir. These areas should be protected by careful

inclusion within adjoining projects, private reserves, or public parks. Some may be suitable for limited pedestrian, bicycle or horse trails, and other passive recreation activities. Preservation of these areas, which buffer and naturally filter surface waters, are critical for the survival of Swift Creek Reservoir as a potable water source. Located along tributaries of Swift Creek Reservoir, these natural features would form a continuous linear network of open spaces within the watershed, linking critical environmental habitats, open space, and public resources. The 100-year floodplains along these creeks account for a total of approximately 1,500 acres.

- **CONSERVATION: Open Water**

  Corridors along the perennial tributaries of Swift Creek Reservoir should be preserved to maintain natural vegetation, wildlife habitats, natural drainage patterns, and the water quality of the reservoir, while also permitting passive recreation for residents or employees in adjoining development. Areas along these tributaries should be protected by careful site design of the adjoining development; some areas may be suitable for limited pedestrian, bicycle or horse trails, or for other passive recreation activities serving the primary land use. These stream corridors would form a continuous network of undisturbed natural space within the watershed, linking critical environmental habitats: woods, ponds, and wetlands.

Mixed Use Nodes

A graduated hierarchy of mixed use nodes is recommended for the area. These nodes should each be characterized by a clearly identifiable core and periphery. The core should contain the most intense land uses and the tallest structures, while less intense uses and lower buildings should occupy the periphery to provide transitions to adjoining development. Pedestrian connections should integrate all development within these nodes.

Appropriate locations for two of these, Regional and Community Mixed Use Nodes, are depicted on the map of land use recommendations. (See Map B) Two others would be sited within larger development schemes or on a case by case basis, provided they meet locational criteria. These nodes are as follows:

- **REGIONAL MIXED USE NODES**

  Appropriate land uses in these areas include regional-scale office or commercial development, large shopping centers, and other large projects containing townhouse or multi-family residential, corporate office, and regional commercial, uses. Typical uses here include uses typical in a Community Node (see below), and also: mortuaries, hotels, laboratories, clinics, communication studios, schools and colleges, commercial automobile parking, and commercial recreational establishments. Uses permitted under circumstances limiting their negative impacts could include: those so permitted in a Community Node; apartments or condominiums; limited light industrial research and development uses; exposition centers; stadiums or arenas; and truck terminals.

  Two Regional Mixed Use Nodes have been designated on the map. (One is split with its southern half in the Western Planning Area.) Such nodes should cover between 700 and 1,000 acres. They should include from five to eight million square feet of

office, commercial, and industrial space; and from one hundred to one thousand multi-family dwelling units. (The one-half of the node at the future intersection of Hull Street Road (Route 360) and Powhite Parkway would thus cover between 350 and 500 acres; include two and one-half to four million square feet of non-residential space and from fifty to 500 multi-family dwelling units.) Residential densities should range from ten to eighteen units per acre and in special circumstances up to twenty-five units per acre. Such nodes could occupy all corners of these intersections.

- **COMMUNITY MIXED USE NODES**

  Appropriate land uses in these areas include community-scale commercial development including larger shopping centers, and also projects containing townhouse or multi-family residential, corporate office, and community commercial uses. Typical uses here include uses typical in Neighborhood Nodes (see below), and also: automobile service stations, washes, and limited repair; night clubs, restaurants, hotels, theaters; recreational establishments; hospitals; laboratories; veterinary hospitals, kennels; and carpenter's, cabinet maker's, and contractor's offices and showrooms. Uses permitted in circumstances limiting their negative impacts could include: those so permitted in the Neighborhood Nodes; automobile and motorcycle sales; office/warehouses; apartments, condominiums, and townhouses.

  Two Community Mixed Use Nodes have been designated on the map. Such nodes should cover between fifty and seventy-five acres. They should include 175,000 to 350,000 square feet of office and commercial space; and from fifty to two hundred multi-family dwelling units. Residential densities should range from seven to fourteen units per acre. Such nodes should include commercial uses on only one corner of the intersections surrounded by office and residential uses as transitions.

- **NEIGHBORHOOD MIXED USE NODES**

  Appropriate land uses in these areas include neighborhood-oriented retail developed under design controls to provide transitions to residential or higher intensity uses, and vehicular and pedestrian circulation between projects. Typical uses include: uses typical in Convenience Nodes (see below); sales of antiques, appliances, art supplies, bicycles, clothing, gifts, furniture, hobby supplies, jewelry, musical instruments, automobile accessories, office supplies, paint, wallpaper, photographic equipment and supplies, sporting goods, and toys; art, music, dance and business schools; galleries; automobile self-service stations; department stores; delicatessens; medical clinics; pet shops; philanthropic activities; restaurants, but not fast food restaurants; travel agencies; and veterinary clinics. Uses permitted in circumstances limiting their negative impacts could include: uses so permitted in Convenience Nodes; greenhouses or nurseries; printing shops; towers; small shopping centers; hospitals; fast food restaurants; kennels; and recreational establishments.

  Neighborhood Mixed Use Nodes should cover between twenty and forty acres. They should include from 100,000 to 250,000 square feet of office and commercial space. They should be located on one corner of an intersection of two arterials or of an arterial and a major collector. These nodes are not shown on the accompanying map, but should be planned jointly with surrounding residential neighborhoods.

- **CONVENIENCE NODES**

  Appropriate land uses in these nodes include limited retail and personal service operations attracting customers from immediate residential neighborhoods only. Typical uses include: sales of food, cameras, drugs, dry goods, flowers, hardware, and newspapers; banks and S&L's; beauty or barber shops; day care centers; tailor, dressmaker, and shoe repair shops; and video sales and rentals. Uses permitted in circumstances limiting their negative impacts could include gasoline sales, motor vehicle parts sales, and pet grooming.

  Convenience Nodes should cover no more than three acres, and should not exceed a density of 5,000 square feet of gross floor area per acre. They should be located on one corner of an intersection of two collector streets or, in some cases, of a collector and an arterial street. These nodes are not shown on the accompanying map, but should be designed within planned residential neighborhoods.

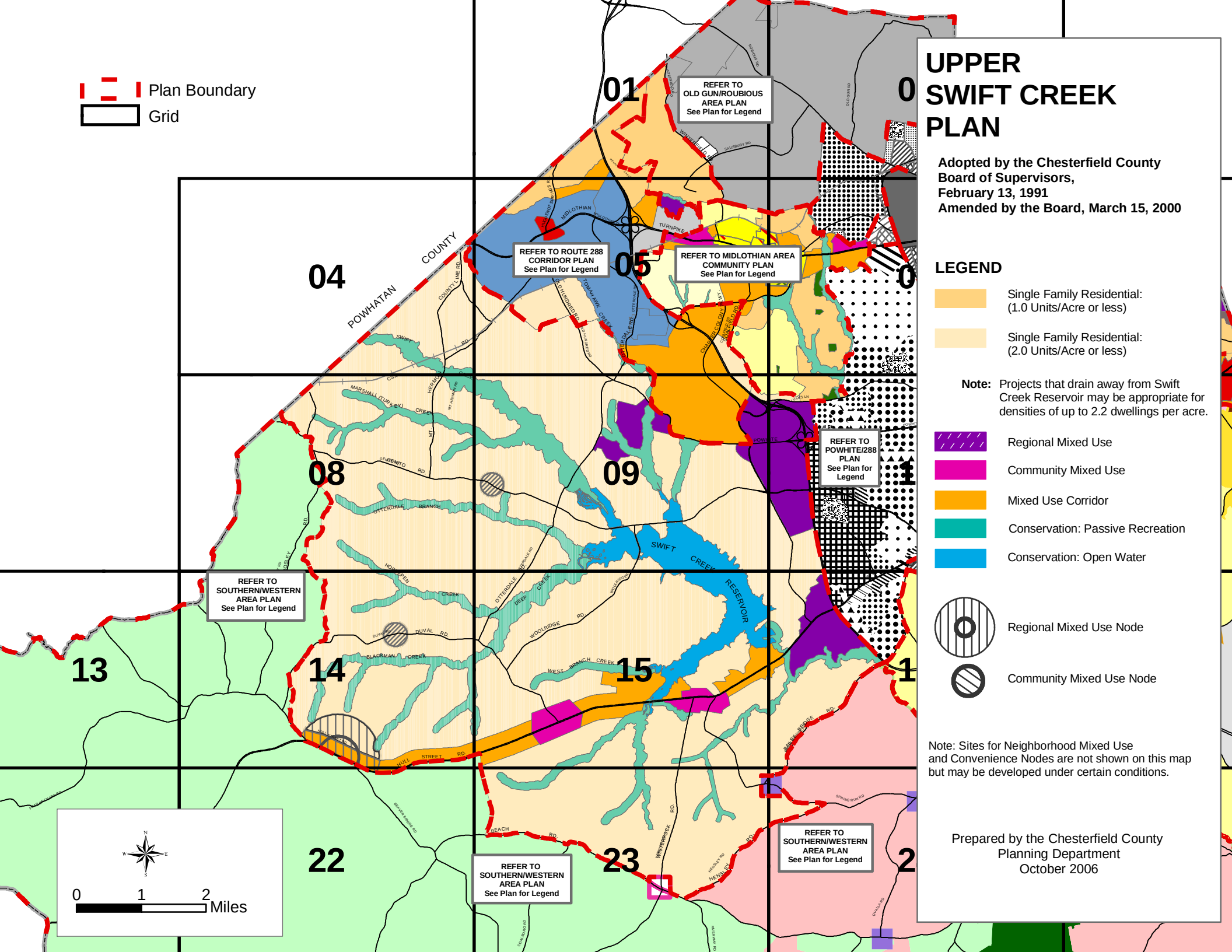
The Upper Swift Creek Plan

Notes

Note:

Single Family Residential 2.0 Units/Acre or less

Projects that drain away from Swift Creek Reservoir may be appropriate for densities of up to 2.2 dwellings per acre.



UPPER SWIFT CREEK PLAN

Adopted by the Chesterfield County Board of Supervisors,
February 13, 1991
Amended by the Board, March 15, 2000

LEGEND

- Single Family Residential: (1.0 Units/Acre or less)
- Single Family Residential: (2.0 Units/Acre or less)

Note: Projects that drain away from Swift Creek Reservoir may be appropriate for densities of up to 2.2 dwellings per acre.

- Regional Mixed Use
- Community Mixed Use
- Mixed Use Corridor
- Conservation: Passive Recreation
- Conservation: Open Water
- Regional Mixed Use Node
- Community Mixed Use Node

Note: Sites for Neighborhood Mixed Use and Convenience Nodes are not shown on this map but may be developed under certain conditions.

Prepared by the Chesterfield County Planning Department
October 2006